

WHAT IS CLAIMED IS:

1 1. A printer having a scanning function for reading and printing an
2 original, comprising:

3 color converting means for converting a first color component
4 signal based on the thus read original into a second color component
5 signal used for printing by referring to a lookup table,

6 wherein said lookup table is formed so that the second color
7 component represents black when each of the color signals constituting
8 the first color component signal is in the range from a value indicating
9 the deepest color state to a predetermined value.

1 2. A printer having a scanning function for reading and printing an
2 original, comprising:

3 color converting means for converting a first color component
4 signal based on the original thus read into a second color component
5 signal used for printing by referring to a lookup table,

6 wherein said lookup table is formed so that the second color
7 component represents white when each of the color signals constituting
8 the first color component signal is in the range from a value indicating
9 the lightest color state to a predetermined value.

1 3. The printer having the scanning function as claimed in claim 1 or

2 2, wherein the first color component signal and the second color
3 component signal are constructed by plural signals indicating colors.

1 4. The printer having the scanning function as claimed in claim 1 or
2 2, wherein the first color component signal is an RGB signal, and the
3 second color component signal is a CMYK signal.

1 5. The printer having the scanning function as claimed in claim 1,
2 wherein said lookup table has grids set to be non-equidistant, and in the
3 vicinity of a portion where said first color component signal indicates the
4 deepest color state, the distance between the grids is set to be large.

1 6. The printer having the scanning function as claimed in claim 1,
2 wherein:

3 said lookup table is expressed by grids including discontinuous
4 values; and

5 said grids are set to be non-equidistant, and a distance between
6 said grids, in the vicinity of a portion where each of color signals
7 constituting the first color component signal indicates the deepest color
8 state, is set to be wide.

1 7. The printer having the scanning function as claimed in claim 2,
2 wherein:

3 said lookup table is expressed by grids including discontinuous
4 values; and

5 said grids are set to be non-equidistant, and a distance between
6 said grids, in the vicinity of a portion where each of color signals
7 constituting the first color component signal indicates the lightest color
8 state, is set to be wide.

1 8. The printer having the scanning function as claimed in claim 1 or
2 2, wherein said color converting means has a second lookup table
3 different from said lookup table, and converts the first color component
4 signal based on the read-out original to the second color component
5 signal used for printing by selectively referring to any one of said lookup
6 table and said second lookup table.

1 9. The printer having the scanning function as claimed in claim 8,
2 wherein said color converting means selects any one of said lookup table
3 and said second lookup table in accordance with a user's setting.

1 10. A color converting device for converting a subject color for
2 conversion comprising a combination of color signals to a target color
3 comprising a combination of color signals,

4 wherein when each of the color signals of the subject color is in
5 the range from a value indicating the deepest color state to a
6 predetermined value, color conversion is carried out by using a lookup
7 table formed in order that the target color is to be black.

1 11. A color converting device for converting a subject color for

2 conversion comprising a combination of color signals to a target color
3 comprising a combination of color signals,
4 wherein when each of the color signals of the subject color is in
5 the range from a value indicating the lightest color state to a
6 predetermined value, color conversion is carried out by using a lookup
7 table formed in order that the target color is to be white.

1 12. The color converting device as claimed in claim 10 or 11, wherein
2 the subject color for conversion is constructed by RGB and the target
3 color is constructed by CMYK.

1 13. The color converting device as claimed in claim 10 or 11,
2 wherein:
3 said lookup table is expressed by grids including discontinuous
4 values; and
5 said grids are set to be non-equidistant, and grids in a portion
6 where the target color indicates black and grids in a portion where the
7 target color indicates white, have a larger distance than grids in other
8 portions.

1 14. A color converting method for converting a subject color for
2 conversion comprising a combination of color signals to a target color
3 comprising a combination of color signals,
4 wherein color conversion is carried out so that the target color is
5 to be black when each of the color signals constituting the subject color is

6 in the range from a value indicating the deepest color state to a
7 predetermined value.

1 15. A color converting method for converting a subject color for
2 conversion comprising a combination of color signals to a target color
3 comprising a combination of color signals,

4 wherein color conversion is carried out so that the target color is
5 to be white when each of the color signals constituting the subject color is
6 in the range from a value indicating the lightest color state to a
7 predetermined value.

1 16. The color converting method as claimed in claim 14 or 15, wherein
2 the color conversion is carried out by referring to a lookup table
3 predetermined with respect to correspondence between the color signal
4 combination of the subject color and the color signal combination of the
5 target color.